



Day : Monday  
Date: 7/30/2007  
Time: 11:17:47

## Inventor Name Search

Enter the **first few letters** of the Inventor's Last Name.  
Additionally, enter the **first few letters** of the Inventor's First name.

**Last Name**

**First Name**

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## Freeform Search

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<b>Database:</b>	US Pre-Grant Publication Full-Text Database <b>US Patents Full-Text Database</b> US OCR Full-Text Database EPO Abstracts Database JPO Abstracts Database Derwent World Patents Index IBM Technical Disclosure Bulletins
<b>Term:</b>	L6 and (pharmaceutical or medicament or drug or active) <div style="float: right; text-align: center;"> <input type="button" value="▲"/>  <input type="button" value="□"/>  <input type="button" value="▼"/> </div>
<b>Display:</b>	<input type="text" value="20"/> Documents in <b>Display Format:</b> <input type="text" value="CIT"/> Starting with Number <input type="text" value="1"/>
<b>Generate:</b> <input type="radio"/> Hit List <input checked="" type="radio"/> Hit Count <input type="radio"/> Side by Side <input type="radio"/> Image	

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### Search History

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**DATE:** Monday, July 30, 2007  
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**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

<u>L7</u>	L6 and (pharmaceutical or medicament or drug or active)	6	<u>L7</u>
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<u>L6</u>	L5 NOT L3	29	<u>L6</u>
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<u>L5</u>	L4 and @ad<20020821	31	<u>L5</u>
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<u>L4</u>	((carrier or excipient) near8 (VMD or "volume median diameter"))	51	<u>L4</u>
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*DB=PGPB,USPT; PLUR=YES; OP=OR*

<u>L3</u>	L2 and ((carrier or excipient) near8 (VMD or "volume median diameter"))	4	<u>L3</u>
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<u>L2</u>	(424/46 or 424/489).ccls.	5612	<u>L2</u>
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<u>L1</u>	((Xian near Ming) near Zeng) AND @pd>20061030	2	<u>L1</u>
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END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 11:45:49 ON 30 JUL 2007)

FILE 'CAPLUS, MEDLINE, USPATFULL, BIOSIS, EMBASE' ENTERED AT 11:46:19 ON  
30 JUL 2007

L1 48 S ((CARRIER OR EXCIPIENT OR LACTOSE) (8A) (VMD OR (VOLUME(W)MED  
L2 4 S L1 (S) (DPI OR (DRY(W)POWDER(W)INHALER) OR INHALA? OR RESPIRA  
L3 4 DUPLICATE REMOVE L2 (0 DUPLICATES REMOVED)  
L4 13 S L1 AND (MEDICAMENT OR DRUG OR ACTIVE OR BRONCHODILATOR OR FOR  
L5 10 DUPLICATE REMOVE L4 (3 DUPLICATES REMOVED)

=> d que L1

L1 48 SEA ((CARRIER OR EXCIPIENT OR LACTOSE) (8A) (VMD OR (VOLUME(W)  
MEDIAN(W) DIAMETER)))

=> d que L2

L1 48 SEA ((CARRIER OR EXCIPIENT OR LACTOSE) (8A) (VMD OR (VOLUME(W)  
MEDIAN(W) DIAMETER)))  
L2 4 SEA L1 (S) (DPI OR (DRY(W) POWDER(W) INHALER) OR INHALA? OR  
RESPIRA?)

=> d que L4

L1 48 SEA ((CARRIER OR EXCIPIENT OR LACTOSE) (8A) (VMD OR (VOLUME(W)  
MEDIAN(W) DIAMETER)))  
L4 13 SEA L1 AND (MEDICAMENT OR DRUG OR ACTIVE OR BRONCHODILATOR OR  
FORMOTEROL OR BUDESONIDE)

L3 ANSWER 1 OF 4 USPATFULL on STN

TI Inhalation compositions with high drug ratios

AB The invention provides a dry powder inhalation composition comprising, at least 0.25% by weight of the composition of an active ingredient with a particle size of less than 10 microns in diameter and a pharmaceutically acceptable particulate carrier with a particle size of less than 250 microns in diameter. Also disclosed are methods for use of the compositions of the invention with dry powder inhalers for therapeutic treatments.

ACCESSION NUMBER: 2006:340303 USPATFULL  
TITLE: Inhalation compositions with high drug ratios  
INVENTOR(S): Zeng, Xian-Ming, Mitcham, UNITED KINGDOM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006292083	A1	20061228
APPLICATION INFO.:	US 2003-646362	A1	20030821 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2002-19512	20020821
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	IVAX CORPORATION, 4400 Biscayne Boulevard, Miami, FL, 33137, US	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	1 Drawing Page(s)	
LINE COUNT:	471	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

TI Inhalation composition comprising formoterol and lactose

AB The invention provides a dry powder inhalation composition comprising medicament particles and a mixture of lactose particles with a VMD of between about 70 and about 120  $\mu$  and a diameter of less than 250  $\mu$ , the mixture being characterized in that up to 96% by weight of the lactose particles are less than 150  $\mu$  in diameter and wherein up to 25% by weight of the lactose particles are less than 5  $\mu$  in diameter. The comps. provide for a more accurate, uniform and consistent dispersion when used with, for example, a multidose dry powder inhaler. Particle size distribution, dose delivery, and fine particle fractions for a formoterol-lactose blend was given in an example.

ACCESSION NUMBER: 2004:182664 CAPLUS  
DOCUMENT NUMBER: 140:205170  
TITLE: Inhalation composition comprising formoterol and lactose  
INVENTOR(S): Zeng, Xian-Ming  
PATENT ASSIGNEE(S): Ivax Corporation, USA; Norton Healthcare Ltd.  
SOURCE: PCT Int. Appl., 23 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004017914	A2	20040304	WO 2003-US26385	20030821
WO 2004017914	A3	20040429		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,

LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
 PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
 TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2499273	A1	20040304	CA 2003-2499273	20030821
AU 2003269989	A1	20040311	AU 2003-269989	20030821
US 2004258626	A1	20041223	US 2003-646361	20030821
US 2005158248	A1	20050721	US 2003-646363	20030821
CN 1694712	A	20051109	CN 2003-822405	20030821
EP 1599209	A2	20051130	EP 2003-751884	20030821

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2006516531	T	20060706	JP 2004-529873	20030821
NZ 538965	A	20061130	NZ 2003-538965	20030821
MX 2005PA01903	A	20050428	MX 2005-PA1903	20050217
ZA 2005002177	A	20060531	ZA 2005-2177	20050315
NO 2005001461	A	20050520	NO 2005-1461	20050318

PRIORITY APPLN. INFO.:

GB 2002-19513	A	20020821
GB 2002-19514	A	20020821
EP 2002-119513	A	20020821
GB 2002-19511	A	20020821
WO 2003-US26385	A	20030821

L3 ANSWER 3 OF 4 USPATFULL on STN

TI Inhalation compositions

AB The invention provides a dry powder inhalation composition comprising medicament particles and a mixture of lactose particles with a VMD of between about 70 and about 120 microns and a diameter of less than 250 microns, the mixture being characterized in that up to 96% by weight of the lactose particles are less than 150 microns in diameter and wherein up to 25% by weight of the lactose particles are less than 5 microns in diameter. The compositions provide for a more accurate, uniform and consistent dispersion when used with, for example, a multidose dry powder inhaler  
 . Also disclosed are methods for use of the compositions of the invention.

ACCESSION NUMBER: 2004:326807 USPATFULL  
 TITLE: Inhalation compositions  
 INVENTOR(S): Zeng, Xian-Ming, Mitcham, UNITED KINGDOM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004258626	A1	20041223
APPLICATION INFO.:	US 2003-646361	A1	20030821 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2002-19513	20020821
	GB 2002-19513	20020821
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	IVAX CORPORATION, 4400 Biscayne Boulevard, Miami, FL, 33137	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	3 Drawing Page(s)	
LINE COUNT:	569	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L3 ANSWER 4 OF 4 USPATFULL on STN

TI Method for pulmonary and oral delivery of pharmaceuticals

AB In a powder formulation for use in a dry powder inhaler, a pharmaceutical acts as its own carrier, so that use of lactose or other excipients are not needed. The dry powder formulation has a single active pharmaceutical compound having two major populations in particle size distribution: microfine particles of the active pharmaceutical, of 1-10 microns in diameter, and larger carrier particles, also of the active pharmaceutical compound. The carrier particles provide a long acting, delayed onset, and optionally therapeutic effect via the GI tract, while the microfine particles provide a fast onset effect via the lung.

ACCESSION NUMBER: 2001:205432 USPATFULL  
TITLE: Method for pulmonary and oral delivery of pharmaceuticals  
INVENTOR(S): Ward, Gary, San Diego, CA, United States  
Schultz, Robert, San Diego, CA, United States  
PATENT ASSIGNEE(S): Dura Pharmaceuticals, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001041190	A1	20011115
	US 6616914	B2	20030909
APPLICATION INFO.:	US 2001-907393	A1	20010717 (9)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-480549, filed on 10 Jan 2000, UNKNOWN		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	LYON & LYON LLP, 633 WEST FIFTH STREET, SUITE 4700, LOS ANGELES, CA, 90071		
NUMBER OF CLAIMS:	23		
EXEMPLARY CLAIM:	1		
LINE COUNT:	319		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1  
 TI Agglomerate Strength and Dispersion of Salmeterol Xinafoate from Powder Mixtures for Inhalation  
 AB The study investigated the role of agglomeration and the effect of fine lactose size on the dispersion of salmeterol xinafoate (SX) from SX-lactose mixts. for inhalation. Particle size distributions were characterized by Malvern Mastersizer S, Aerosizer and Spraytec, and imaging conducted by SEM. Inter-particulate adhesion was quantified by atomic force microscopy. Deposition of SX was measured using a twin stage impinger. SX was analyzed using validated high-performance liquid chromatog. method ( $r^2=1.0$ ,  $CV=0.4-1.0\%$ ). Addition of fine lactose with a vol. median diam. (VMD) of  $7.9\text{ }\mu\text{m}$  to a SX- lactose carrier and carrier-free mixture resulted in significantly better dispersion ( $16.8\%$  for  $20\%$  added fine lactose) than fractions with VMD of  $3.0$ ,  $17.7$  and  $33.3\text{ }\mu\text{m}$  (less than  $9.1\%$  for  $20\%$  fine lactose). Using the carrier-free mixts., particle sizing of the aerosol cloud using the Spraytec, coupled with the application of the Aerosizer using differing dispersion energies and SEMs of the samples, indicated that an open packed, agglomerate structure improved SX dispersion. The highest extent of SX dispersion occurred when SX and fine lactose were detached from the surface, usually in the form of loose agglomerates. The outcomes of this research demonstrated how agglomerate structure influenced dispersion and the key role of fine lactose particle size in SX dispersion from mixts. for inhalation.

ACCESSION NUMBER: 2006:1163978 CAPLUS  
 DOCUMENT NUMBER: 146:32717  
 TITLE: Agglomerate Strength and Dispersion of Salmeterol Xinafoate from Powder Mixtures for Inhalation  
 AUTHOR(S): Adi, Handoko; Larson, Ian; Chiou, Herbert; Young, Paul; Traini, Daniela; Stewart, Peter  
 CORPORATE SOURCE: Department of Pharmaceutics, Victorian College of Pharmacy, Monash University, Parkville, 3052, Australia  
 SOURCE: Pharmaceutical Research (2006), 23(11), 2556-2565  
 CODEN: PHREEB; ISSN: 0724-8741  
 PUBLISHER: Springer  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 10 USPATFULL on STN  
 TI Method of preparing dry powder inhalation compositions  
 AB The invention provides a method of preparing a dry powder inhalation composition comprising a pharmaceutically acceptable particulate carrier, a first particulate inhalant medicament and a second particulate inhalant medicament. Also provided are dry powder compositions and methods of using them with a dry powder inhalation device.  
 ACCESSION NUMBER: 2005:182865 USPATFULL  
 TITLE: Method of preparing dry powder inhalation compositions  
 INVENTOR(S): Zeng, Xian-Ming, Surrey, UNITED KINGDOM

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005158248	A1	20050721
APPLICATION INFO.:	US 2003-646363	A1	20030821 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	GB 2002-19511	20020821
	GB 2002-19513	20020821

GB 2002-19513 20020821  
DOCUMENT TYPE: Utility  
FILE SEGMENT: APPLICATION  
LEGAL REPRESENTATIVE: IVAX CORPORATION, 4400 Biscayne Boulevard, Miami, FL, 33137, US  
NUMBER OF CLAIMS: 15  
EXEMPLARY CLAIM: 1  
LINE COUNT: 484  
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN  
TI Inhalation composition comprising formoterol and lactose  
AB The invention provides a dry powder inhalation composition comprising medicament particles and a mixture of lactose particles with a VMD of between about 70 and about 120  $\mu$  and a diameter of less than 250  $\mu$ , the mixture being characterized in that up to 96% by weight of the lactose particles are less than 150  $\mu$  in diameter and wherein up to 25% by weight of the lactose particles are less than 5  $\mu$  in diameter. The comps. provide for a more accurate, uniform and consistent dispersion when used with, for example, a multidose dry powder inhaler. Particle size distribution, dose delivery, and fine particle fractions for a formoterol-lactose blend was given in an example.

ACCESSION NUMBER: 2004:182664 CAPLUS  
DOCUMENT NUMBER: 140:205170  
TITLE: Inhalation composition comprising formoterol and lactose  
INVENTOR(S): Zeng, Xian-Ming  
PATENT ASSIGNEE(S): Ivax Corporation, USA; Norton Healthcare Ltd.  
SOURCE: PCT Int. Appl., 23 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004017914	A2	20040304	WO 2003-US26385	20030821
WO 2004017914	A3	20040429		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
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ZA 2005002177	A	20060531	ZA 2005-2177	20050315
NO 2005001461	A	20050520	NO 2005-1461	20050318
PRIORITY APPLN. INFO.:			GB 2002-19513	A 20020821
			GB 2002-19514	A 20020821



EP 2002-119513	A	20020821
GB 2002-19511	A	20020821
WO 2003-US26385	A	20030821

L5 ANSWER 5 OF 10 USPATFULL on STN

TI Inhalation compositions

AB The invention provides a dry powder inhalation composition comprising medicament particles and a mixture of lactose particles with a VMD of between about 70 and about 120 microns and a diameter of less than 250 microns, the mixture being characterized in that up to 96% by weight of the lactose particles are less than 150 microns in diameter and wherein up to 25% by weight of the lactose particles are less than 5 microns in diameter. The compositions provide for a more accurate, uniform and consistent dispersion when used with, for example, a multidose dry powder inhaler. Also disclosed are methods for use of the compositions of the invention.

ACCESSION NUMBER: 2004:326807 USPATFULL

TITLE: Inhalation compositions

INVENTOR(S): Zeng, Xian-Ming, Mitcham, UNITED KINGDOM

	NUMBER	KIND	DATE
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	GB 2002-19513	20020821
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
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NUMBER OF CLAIMS:	12	
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NUMBER OF DRAWINGS:	3 Drawing Page(s)	
LINE COUNT:	569	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.